

to its sine of refraction as four to three; the sine of incidence of that ray out of Glass into Water will be to its sine of refraction as 20 to 31 and 4 to 3 jointly, that is, as the Factum of 20 and 4 to the Factum of 31 and 3, or as 80 to 93.

And these Theorems being admitted into Opticks, there would be scope enough of handling that Science voluminously after a new manner; not only by teaching those things which tend to the perfection of vision, but also by determining mathematically all kinds of Phenomena of Colours which could be produced by refractions. For to do this, there is nothing else requisite than to find out the separations of heterogeneous rays, and their various mixtures and proportions in every mixture. By this way of arguing I invented almost all the Phenomena described in these Books, beside some others less necessary to the Argument; and by the successes I met with in the tryals, I dare promise, that to him who shall argue truly, and then try all things with good Glasses and sufficient circumspection, the expected event will not be wanting. But he is first to know what Colours will arise from any others mixt in any assigned Proportion.

PROP. IV. THEOR. III.

Colours may be produced by composition which shall be like to the Colours of homogeneous Light as to the appearance of Colour, but not as to the immutability of Colour and constitution of Light. And those Colours by how much they are more compounded by so much are they less full and intense, and by too much composition they may be diluted

*diluted and
also Colours p
like any of the*

For a mixture of
pounds an orange
orange which is
lours lies between
is homogeneous
heterogeneous, a
through a Prism
is changed and re
and yellow. A
bouring homogene
lours, like the
low and green, t
terwards, if blue
the middle Colo
fition. For the y
equal in quantity
ly towards them
it were in equi
yellow on the o
but by their mix
To this mixed
some red and vio
ly cease but only
creasing the red
dilute, until by
be overcome and
Colour. So if t
the Sun's white